

UPGRADE
WORKSHOP

INTRODUCTION

If you've ever been banished from the living room to watch your favourite programmes on an old portable TV set, why not add a TV tuner to your desktop PC or notebook and watch on that instead?

With a crisp LCD screen and the processing power of your PC, you'll get a better-quality picture than that old portable TV can manage. You can also use your hard disk to record, pause and even rewind live TV, so you won't miss a crucial moment ever again. You could even add a second tuner so that you can record one programme while watching another.

Windows Media Center, previously part of Windows XP Media Center Edition, is now available with some versions of Windows Vista, so many more users can now benefit from its slick interface and electronic programme guide (EPG). Windows XP Home and Professional Edition users aren't left out, however, as there are many excellent TV tuner and software bundles available. This guide will help you choose a TV tuner, install it and get it up and running successfully.

Seth Barton

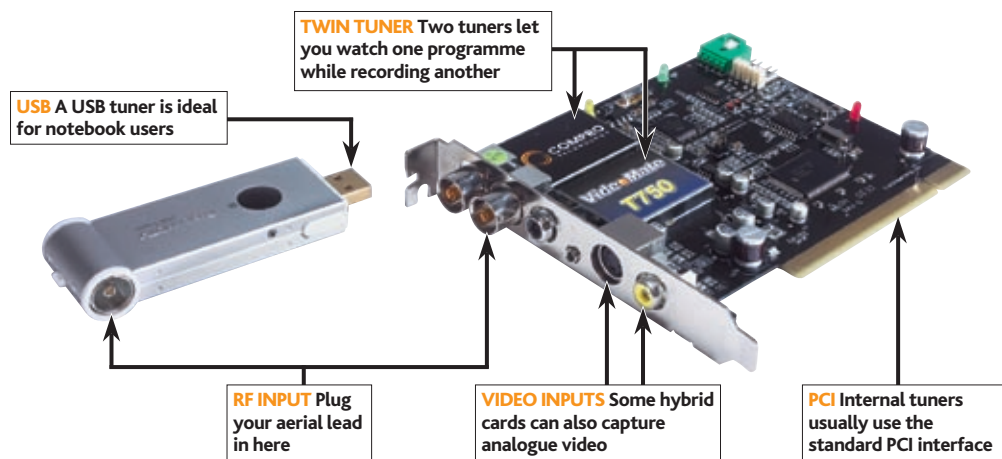
Notebooks and
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Fitting a TV tuner

Watch all your favourite shows away from the box by adding a TV tuner to your computer. Seth Barton puts you in the picture



TV tuners used to come in analogue and digital varieties. However, with the increasing popularity of digital TV, analogue-only tuners are now rare. However, you can get hybrid tuners that receive both analogue and digital broadcasts. If you don't know whether you can receive digital broadcasts, visit www.digitaluk.co.uk and use the postcode checker. You'll need a TV aerial to receive any type of broadcast, though; see our 'Compatibility checklist' below.

Next, you'll need to decide which interface you'll use to connect the TV tuner to your PC. Most tuners fit a standard PCI slot inside your desktop PC. However, some tuners use the newer PCI-Express x1 slot. You'll need to open up your PC's case to see which spare slots are available, using your motherboard manual to identify them. Make sure the backing plate related to the slot is free and that installing a card won't block the airflow to your graphics card.

If you don't have enough space inside your PC, or you're adding a TV tuner to a notebook, you'll need a

USB tuner instead. See the 'Compatibility checklist' for more details.

Users of Windows Vista Home Premium or Ultimate, along with Windows XP Media Center Edition, will be able to use Windows Media Center to control a TV tuner. Check your chosen tuner has Media Center-compatible drivers, also known as broadcast driver architecture (BDA) drivers. Look for the Media Center-compatible logo on the box or check the manufacturer's website. Windows XP users have to use the software bundled with the tuner, or opt for a third-party alternative such as CyberLink's excellent PowerCinema 4, which is also compatible with any tuner that uses BDA drivers. Some hybrid cards' Media Center drivers support only digital broadcasts, so be sure to double-check if you require analogue support.

If you want to record one programme while watching another, you'll need two TV tuners. Media Center supports dual tuners as long as they are both receiving the same type of broadcast, digital or

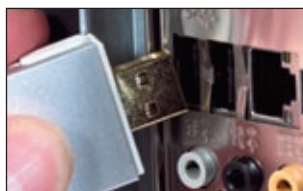
Compatibility checklist



AERIAL SIGNAL

Your notebook may be portable and wireless, but TV reception still requires an aerial. Before getting a TV tuner, you will need to consider how you are going to run an aerial lead to your computer. If you don't have a spare aerial socket then you may need to use a splitter in order to divide the signal. If you are using dual TV tuners then you'll need two aerial leads.

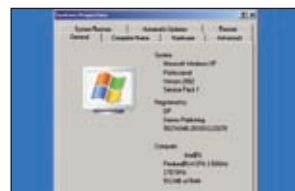
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TUNERS

If you're planning on using a USB TV tuner, you need to ensure that your USB ports are up to it. You'll need Full-Speed USB ports as a minimum, with some TV tuners requiring faster USB2 ports to function properly. Check the requirements of your chosen TV tuner. Any PC bought in the past five years should have USB2 ports, but for older PCs you should refer to your motherboard manual.

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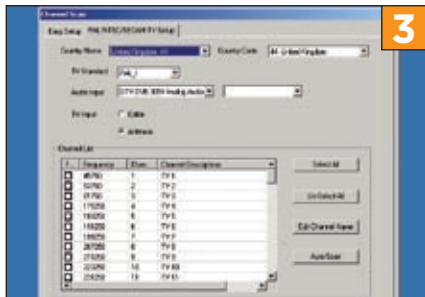


MINIMUM SPECIFICATIONS

The TV tuner simply receives the broadcast and alters the signal so your PC can understand the data. Playback of video and audio data relies on your processor. Basic TV tuners have modest minimum specifications but pausing live TV, using diversity, requires extra power. Check the minimum specification for your desired features on your chosen TV tuner.

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analogue. They don't even have to match; USB and PCI varieties from different manufacturers work fine together. You can also get twin tuners, two tuners on a single card or USB stick. Some twin tuners offer improved reception by using both tuners in tandem, an option commonly known as diversity. This allows remarkably good reception of digital TV using even the supplied mini-aerials. However, diversity is not compatible with Windows Media Center.

INSTALLATION

Setting up a TV tuner is much easier than it used to be, with installation wizards taking away a lot of the pain. Still, here are a few tips to make sure everything runs smoothly.

1 INSTALL THE TV TUNER

Those installing PCI or PCI Express cards need to shut down the PC and then turn it off at the mains, but don't unplug it. Open the side of the PC's case and touch the exposed metal on the inside of the case to discharge any build-up of static you may have.

Locate the appropriate slot on the motherboard. On the back of the case are a number of blanking plates, clipped or screwed into place. Locate the plate that relates to the required slot and remove it, putting the screw to one side. Unpack the card, handling it only by the edges. Now plug in the card by pushing the gold-coated connectors gently but firmly into the slot. Once in place, use the screw to secure it.

EXPERT TIP
Many USB TV tuners are bundled with mini-aerials. However, you'll be lucky to pick up a watchable digital signal with them, unless using diversity reception.

For USB tuners, simply find a spare port and plug it in. Some are rather large, however, and can obscure neighbouring ports. In this case, you might want to use a USB extension lead. These are sometimes included with the tuner; if not, they can be bought online for less than two pounds.

Once plugged in, you'll need to connect the aerial lead to the RF input. Some USB tuners have mini RF inputs instead, but adaptors will be supplied for these. Dual tuners, and twin tuners with diversity, require two RF inputs to be connected.

2 SET UP TV TUNER WITH WINDOWS MEDIA CENTER

After the TV tuner is installed, Windows will prompt you to install drivers for your new hardware. For most drivers, you should cancel this process and run the manufacturer's driver installation program. Some drivers may require manual installation. Simply follow the onscreen prompts, browsing to the driver's location, either on the supplied CD or in the folder to which you downloaded them. Once the drivers are installed, you should restart your PC.

Start Windows Media Center by selecting Start, Accessories, Media Center, Media Center. Once loaded, choose Settings, then TV and finally Set Up TV Signal. You will be asked to select or confirm your region as United Kingdom. Then select or confirm your input as Antenna. After that, choose your signal type as Analogue Terrestrial

or Digital Terrestrial. This option will not appear if your TV tuner, or its Media Center driver, supports only digital broadcasts. If you are adding a second tuner or twin tuner then a screen should now appear, naming both tuners. Make sure that both tick boxes are checked before continuing.

Next, follow the onscreen instructions to download the electronic programme guide information. After this, Media Center will scan for channels automatically and store them.

3 SET UP TV TUNER IN WINDOWS XP

Once the tuner is installed, Windows XP users should follow the instructions provided by the tuner's manufacturer concerning the installation of software. Select the United Kingdom option when asked. Analogue tuner software may ask what type of TV signal you receive, in which case select PAL-I. Digital broadcasts in the UK use the DVB-T standard.

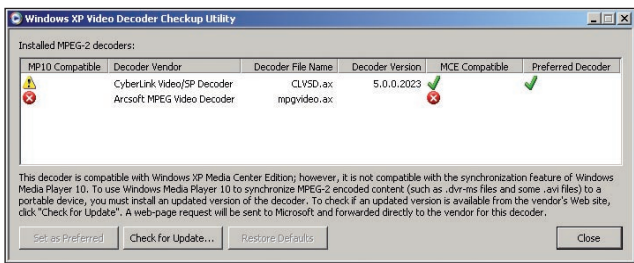
Some hybrid tuner software will let you select analogue or digital during setup, while others default to one or the other. If this is the case, you'll have to find the Options menu and change the setting before rescanning using the scanning tool.

Twin tuners supporting diversity can use both tuners in tandem to boost reception. You'll have to activate this feature in the software's option menu. Once activated, you'll lose the ability to receive one channel while recording another. For diversity to work, you'll need to place the two supplied mini-aerials around a metre apart to get the best possible reception.

Testing and troubleshooting

If Windows Media Center or the supplied TV tuner software can't find your tuner hardware, right-click on My Computer, choose Properties, select the Hardware tab and then Device Manager. Expand the Sound, Video and Game Controllers section and check the tuner is listed. If it's missing, or there's an exclamation mark beside it, reinstall the drivers and restart the PC. If this fails, shut down the PC, remove the tuner, restart the PC and shut down again. Then reinstall the tuner from Step 1 above.

If the channel scan finds no channels in either the Windows XP tuner software or Media Center, check the RF input is plugged in properly. If you are using a portable or mini aerial, try moving the aerial and the rescanning. Double-check the settings are correct for the country and signal type you want to receive. Finally, try moving your PC or notebook to an aerial you know is working properly, such as the one beside your living room TV, and try rescanning using that. If that doesn't work then



◀ Windows XP Media Center Edition does not come with the essential MPEG2 decoder software, so you'll have to supply your own

the tuner is probably faulty and you should contact your retailer.

If you get a Decoder Error message when trying to watch digital broadcasts in Windows XP Media Center, your PC lacks a Media Center-compatible MPEG2 decoder. Double-check by downloading the Windows XP Video Decoder Checkup Utility from <http://tinyurl.com/3vguc>. Follow the instructions to download, install and run the utility. It will list all the decoders on your PC and whether they are compatible with Media

Center, referred to as MCE. If your tuner isn't compatible, buy an inexpensive OEM version of PowerDVD 7 from an online retailer; it shouldn't cost more than £5.

A poor signal from the aerial can result in noise or picture break-up. If it's a portable or mini aerial, try adjusting its position and turn on diversity if available. If not, consider investing in a signal booster to improve reception. These cost around £15 and are available online or from electrical retailers.